Travel Soldier Readiness Process (SRP)

« The Travel Clinic »

General Counseling for the Traveler to Africa

Thank you for attending the Stuttgart Army Garrison Health Clinic's Travel SRP (Soldier Readiness Process, aka "Travel Clinic") at the Kelley Annex. We wish you a safe and healthy trip, and would like to review (1) some principles common to all travelers that encourage both illness and injury prevention, and (2) self-treatment of some common travel-related conditions.

First things first

Several items are essential prior to considering travel to Africa, based upon theater clearance and medical advice/force health protection guidance

- Yellow fever vaccination must be received at least 10 days prior to travel
  - Protection from this deadly disease requires this minimum time
  - Proof of vaccination must be carried with your passport
  - May be required for applying for entry visas in advance of travel
- Malaria medications may not prevent you from contracting malaria
  - They are generally effective in preventing the signs and symptoms of malaria disease, however, when taken correctly
  - **Prevention of mosquito bites** is the only thing that truly prevents malaria
- There are medical reasons for recommending an individual ***not*** travel
  - Immune suppression (steroids, cancer, immune disease, etc.)
  - Pregnancy
  - Inability to take/tolerate antimalarial medication or immunizations
  - Uncontrolled diabetes, severe heart disease
  - Significant health conditions (should be discussed with your provider prior to travel)

How to prepare for your Travel SRP visit

Your pretravel counseling visit is most valuable to you when you know your precise itinerary

- Dates of travel: specific dates, airports through which you will fly
- Places visited: countries, cities, routes
- Accommodations: air conditioning, window screens, bed netting
- Conditions expected: climate, latitude, season
- Activities (other than attending meetings)

Medical insurance is not the same thing as travel insurance. Ask before you go what steps you must take to be insured for **medical air evacuation**.

Additionally, consider common items that many people forget

- Supply of your chronic medications, medication list (using generic names)
- Spare eyeglasses, contacts and contact solution, vision prescription
- Sunglasses, wide-brimmed hat, sunscreen, lip protection with SPF
- Medic-Alert device, epinephrine pen if necessary (usually requires your doctor's written prescription or statement of need)
- Some local currency or personal checks to use at the Embassy, as ATM availability and safety is not guaranteed
- Minimal first-aid kit with the addition of hand sanitizer, bismuth (Pepto-Bismol) tablets, DEET (min. 25%) lotion or spray, Tylenol and Motrin, etc.

Considerations common to all itineraries

Injuries are more common than serious illnesses in travelers, but seldom receive much attention. **Situational awareness** is the key to injury prevention, paying particular attention to vehicular traffic (whether you are a driver, passenger, or pedestrian). Life-threatening trauma may result in the need for blood product transfusions, which may carry further infection risks. Violent crime may be another source of injury (including blood borne diseases like HIV and viral hepatitis), so pay attention to Department of State travel alerts and local intelligence regarding known danger areas. Use the buddy system and consider leaving word locally and at home regarding your schedule so that you will be missed if you don't check in by a certain time.

Some additional tips

- Look poor
- Walk with hands unencumbered
- Consider carrying "decoy" money, hiding your "real" money on your body
- Beware of drink spiking—never put down your drink
- Know your routes and exits

Immunizations all have potential side effects, and there are live vaccines that may not be appropriate for everyone. It usually is considered safe to have your immunizations all on the same day, but there may be specific recommendations for the timing of shots given on different days.

Routine immunizations

- Seasonal influenza
- Tetanus booster (Td), or single-dose Tdap substitution if adult

- Measles/mumps/rubella and polio series, with an additional adult booster
- Varicella (chicken pox) if not already immune by natural disease
- Any age-appropriate, currently recommended immunization you may be lacking

Immunizations are itinerary-specific, but several are particularly useful for travelers to Africa

- Hepatitis A virus: generally self-limiting—but miserable—form of liver infection from ingestion of contaminated food or water (fecal contamination, infected food handler, etc.)
- Hepatitis B virus: chronic liver infection (that may lead to liver cancer) contracted through exposure to blood/body fluids (transfusion, sexual activity, needle sharing)
- Typhoid fever: an invasive form of *Salmonella* that may be contracted through contaminated food and water; may require blood culture or bone marrow biopsy to diagnose
- Meningitis: a bacterial infection of the lining of the brain that can be fatal or permanently debilitating
- Yellow fever: a viral infection carried by mosquitoes that is frequently fatal, causes widespread bleeding externally and internally

There are several other ways to prevent illness during travel—these center on behaviors we know to be rational even at home!

1. Sexually transmitted (or sexually related) infections
2. Insect bite avoidance, particularly mosquitoes and ticks
3. Good hand hygiene and food/beverage choices

Sexually transmitted infections (STIs) include HIV, hepatitis B virus, syphilis, gonorrhea, chlamydia, herpes, genital warts, and many others that may be more or less familiar to the average US resident.

- STIs are endemic in most African countries
- STIs travel in groups: person-to-person transmission is easier (such as for HIV) when one carries another organism already (such as syphilis)
- STIs often do not cause symptoms until the diseases are already chronic

If you plan to engage in any sexual activity (or allow for that possibility) during travel, consider bringing and using condoms or other barrier methods. It is important to note that there are many STIs that can be transmitted despite proper condom use.

Mosquitoes can carry malaria (see below), dengue fever, yellow fever, West Nile fever, chikungunya, and encephalitis viruses – to mention only a few. **Ticks** carry typhus, Lyme disease, anaplasmosis, babesiosis, and many other odd bacterial diseases some of which have not yet been named! Avoidance of all insect bites is a realistic goal if you plan properly.

- Timing: mosquitoes that carry malaria bite during the dark hours from dusk to dawn; those that carry yellow fever and dengue fever bite during daylight
- Repellent: **DEET**-containing repellants (Off, Cutter, Repel, etc.) are effective at strengths at least 25% when applied to exposed skin at appropriate intervals (labeled on each product)
- Insecticide/repellant: clothing and bed nets treated with **permethrin** are effective, and (if not dry-cleaned) will hold the chemical despite a number of launderings (varies by formulation and nature of fabric).
- Bed nets treated with permethrin are essential when hotel accommodations lack air conditioning or intact screens. AC and power may not work consistently even when available, and housekeeping may allow insects to enter your room if they open windows. Field conditions mandate bed net use.
- **All travelers to Africa are required to bring along a treated bed net**

The effectiveness of the above chemical measures has been demonstrated in research trials, and the same chemicals are available through Readiness, the AFRICOM Commandant's supply custodian, and the Travel SRP.

Traveler's diarrhea is a spectrum of disease, ranging from transient loose or painless watery stools to bloody, crampy dysentery (see Traveler's Diarrhea diagram). Avoiding contaminated foods and beverages is the key to avoiding traveler's diarrhea. The first step is to keep your hands clean by frequently washing your hands (or using waterless hand sanitizer) to avoid infecting yourself! Other considerations regard beverage and food choices.

Beverages and water hygiene

- Bottled water is usually good, although in poor countries they may re-cap
- Carbonated beverages (colas, beer, sparkling water, champagne) are safe
- It is possible to contaminate safe beverages
    - Ice cubes made from contaminated water
    - Served in contaminated containers
- Showers and sinks also are suspect
    - Avoid getting shower water in your mouth or nose
    - Brush your teeth with bottled water
- Contaminated water often is used to wash cold foods (salads, fruits)
- Piping hot coffee and tea usually are considered safe

Filtering water takes out gross impurities, but only **purified** water (such as reverse osmosis or properly used purification tablets) is safe from infection.

Food hygiene is simpler: boil it, cook it, peel it…or forget it! Hotel accommodations often provide a breakfast buffet, and it may be bewildering to figure out which items are safest to enjoy. Some suggestions:

- Dishes kept very hot over flame
- Baked goods

- Yogurt labeled as pasteurized with expiration date
- Made-to-order items (such as eggs) where you can instruct the cook real-time

You should avoid unpasteurized dairy, undercooked meats, washed salads, cut fruit, fresh juices, most condiments and sauces served in room temperature bowls. Realize that if you take Prilosec, Nexium, Zantac or other similar acid-reducing medication it may be easier to contract food-borne illnesses.

The excitement of traveling, however, often includes trying new, local cuisine. Add the diplomatic pressure to avoid offending your host, and you may eat foods that you know are not the best health risk. Fortunately there are several strategies you may employ

- Eat the food, and if you become ill take medications (Travel SRP prescription)
- Take an antibiotic tablet before the questionable meal
- Take two Pepto-Bismol (bismuth subsalicylate) tablets before each meal and at bedtime
    - Nonprescription, saves antibiotics for known infections
    - May turn back of tongue black or brown, turns stools black (harmless)

Take the antibiotic if you need it, right along with the loperamide (Imodium), but stop once the symptoms have resolved. You don't have to take all the pills in the bottle, like you may have been instructed to do for other infections. If you take three days of antibiotics and are still ill, you need medical attention!

Malaria

Malaria is a parasite that invades and destroys red blood cells, clogs vessels, and prevents circulation to vital organs. The most deadly form of malaria, *Plasmodium falciparum*, is the most common species encountered in Africa. As above, prevention of the disease involves avoiding mosquito bites and taking antimalarial medications.

Antimalarials that are effective in Africa include, Malarone (atovaquone/proguanil), doxycycline and Larium (mefloquine)

- Malarone is protective only against malaria, and is highly effective when taken daily
    - Malarone is the drug of choice for travel to high-transmission areas
- Doxycycline protects against malaria and some other diseases, and must be taken at precisely the same time every day to be effective
- Mefloquine is not routinely prescribed, and should not be used by security details, personnel on flight status, or anyone with a history of psychiatric disease (depression, bipolar, etc.) or cardiac conduction problem (like arrhythmias)

Failure to take the antimalarial as prescribed may result in failure of therapy. Once you have malaria, you have malaria—even if you take the malaria prevention medication perfectly thereafter.

Malaria symptoms usually include fever, headache and flu-like body symptoms, but can mimic other common illnesses like gastroenteritis with nausea, vomiting, diarrhea and

abdominal pain. Fever during or after travel to malarious areas in Africa must be evaluated to rule out malaria.

Environmental conditions offer additional challenges, particularly for travelers engaging in field activities in austere locations.

Rabies still occurs in most African countries. Unless you plan to handle animals closely (as in veterinarians or animal rescue work) your risk of rabies exposure is very small. It may be helpful to keep in mind a few facts

- Rabies is a **virus** carried by **mammals**, particularly dogs
- Rabies is transmitted through **saliva** by **bite** or **scratch**
- Rabies causes **encephalitis** (brain inflammation) that is always fatal
- Rabies risk is proportional to the distance from the bite/scratch to your head (i.e. the farther from your head, the longer you have before you get encephalitis)
- Most countries do not have rabies vaccines or immune globulin considered safe by US standards

If you sustain a bite or scratch from a potentially rabid animal, **first aid** is your priority. Wash and scrub the exposed site with whatever water source you have available, and with whatever soap and disinfectants you have available; this step removes most of particles from the wound, making it much less likely that you will become infected. If possible, capturing or killing the animal (preserving its head) will allow for quarantine or autopsy, helping determine if the animal has/had rabies. No matter what, treat the situation as a medical urgency and seek post exposure immunization and immune globulin as soon as you can.

Heat can be fatal if you can't get out of it! Although extremely important, hydration alone does not treat or prevent heat stroke. Heat stroke is treated by removing someone from the source of heat and helping them get rid of as much heat as possible. When humidity is too high to prevent evaporation of perspiration you won't cool down. Sun protection, sunscreen, and sunglasses are useful, complemented by staying under shade and reducing your activity level.

Altitude poses a different kind of problem, but the solution to altitude-related symptoms is the same: get out of the environment (i.e. descend). Several medications can ameliorate or prevent some of the manifestations of altitude, but they mask or potentially delay the symptoms. Ascending slowly enough to accommodate to the pressure change is the real answer.

Additional cautions apply to going barefoot (risk of worms that enter through the skin), wading/swimming in fresh water (parasites and bacteria that enter through intact skin or mouth), obviously polluted environments, and exposure to individuals with a chronic cough (influenza, tuberculosis risk).

Traveler's thrombosis, or blood clots associated with airplane travel, tends to occur in the traveler who is dehydrated, moves little during the flight, and often with additional factors such as oral contraceptives, smoking, or a primary disorder of the blood. Flights from Europe to Africa can be longer than trans-Atlantic, but the principles are the same. The best

advice to reduce the chances of blood clots is to drink fluids throughout the flight: this makes you get up periodically to use the restroom, proving you are maintaining hydration and making you use your leg muscles. Additionally, avoid tranquilizers, Benadryl (diphenhydramine) and the like as immobilization leads to blood pooling in your legs, setting you up for clots.

Travelers' Diarrhea Self-Treatment

Travelers' diarrhea is the most common travel-related illness

Prevention is the key:

- Hand washing and sanitizer use
- Avoid tap water, ice
- Avoid foods washed with tap water
- Hot foods should be served hot
- Brush teeth with bottled water

Diarrhea

Rehydration

Mild
1-2 stools/ day with minimal/no symptoms

Moderate
≥3 stools/day

Severe
≥3 stools/day, fever or blood in stool

+/- Loperamide

Minimal Symptoms

Distressing Symptoms

Antibiotic* (1-3 days) +/- Loperamide

Loperamide

Loperamide + Antibiotic*

Resolution?

NO

Antibiotic* (1-3 days)

Warning signs of infectious diarrhea may include

- Blood in stool
- Mucus in stool
- Fever
- Severe abdominal pain

Start antibiotics as soon as you believe you may have infectious diarrhea. Stop taking antibiotics when symptoms resolve, even if it is sooner than 3 days.